



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,291	05/16/2005	Bhushan L Sopori	NREL 02-15	5821

Paul J White  
NREL  
1617 Cole Blvd  
Golden, CO 80401

7590

04/13/2009

EXAMINER
----------

SIEFKE, SAMUEL P

ART UNIT	PAPER NUMBER
----------	--------------

1797

MAIL DATE	DELIVERY MODE
-----------	---------------

04/13/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-34, 37-40 and 59-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Bosacchi et al. (USPN 4,625,114).

Bosacchi discloses a method for nondestructively (con-contacting) determining the characteristics of a multilayer thin film structure that comprises receiving a signal that includes information germane to total reflectance of a wafer (col. 8, lines 3-60, claim 1, (a, b), claim 4), comparing the information to information in a database (col. 12, line 65- col. 13, line 8, claim 1 (e), claim 4), determining one or more characteristics of the wafer based on the comparing wherein the one or more characteristics are selected from a group consisting of thickness and surface characteristics (claim 1, 4). The database includes calculated, measured, spectral, calculated spectral, a variety of wafer thicknesses, wafer surface characteristics (col. 9, lines 45-65; col. 12, lines 30-65). The signal is an optical signal that is captured by a photodetector (50, fig.4). Regarding the amendment to claim 1, in figure 3 ref. d1, a incoming light beam illuminates a first surface (top surface of d1) and then strikes the second surface opposite the first surface (bottom surface of d1). The substrate d1 is supported on a substrate d2 which acts as a reflective support which aids in the total reflectance signal.

### ***Response to Arguments***

Applicant's arguments filed 1/22/09 have been fully considered but they are not persuasive. Applicant argues, "Bosacchi does not teach illuminating a surface of a wafer and then determining total reflectance of the radiation/light that is directly incident on the wafer as a manner of determining thickness and surface characteristics of the wafer. Further, Bosacchi does not disclose the use of a reflective support or a reflective coating on the second surface of the wafer." Regarding the amendment to claim 1, in figure 3 ref. d1, a incoming light beam illuminates a first surface (top surface of d1) and then strikes the second surface opposite the first surface (bottom surface of d1). The substrate d1 is supported on a substrate d2 which acts as a reflective support which aids in the total reflectance signal.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 1797

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAM P. SIEFKE whose telephone number is (571)272-1262. The examiner can normally be reached on M-F 7:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samuel P Siefke/  
Primary Examiner, Art Unit 1797